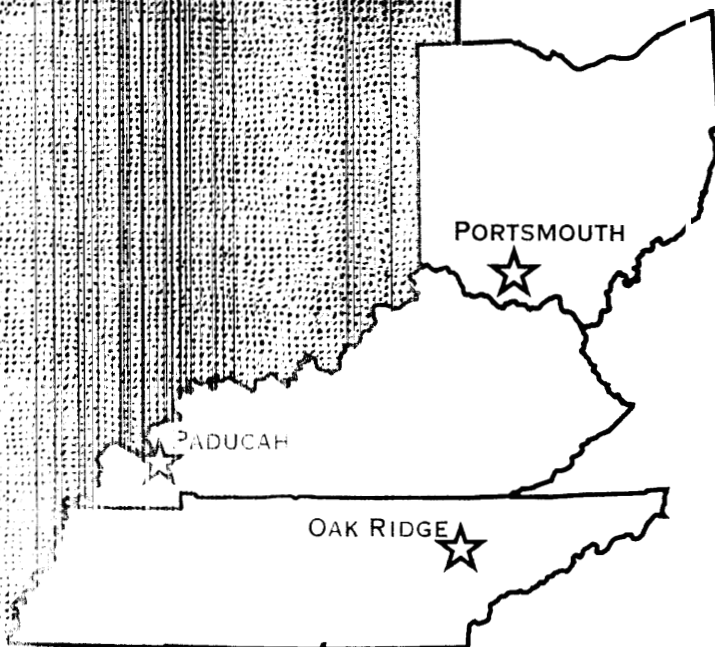


BJC/PAD-396

ENVIRONMENTAL MANAGEMENT
& ENRICHMENT FACILITIES
MANAGEMENT AND INTEGRATION CONTRACT

**Final Inventory/Characterization
Report for the OS-05
Department of Energy
Material Storage Area at the
Paducah Gaseous Diffusion Plant,
Paducah, Kentucky**



This document has received the appropriate reviews
for release to the public.

**Final Inventory/Characterization Report for the OS-05
Department of Energy Material Storage Area (DMSA)
at the Paducah Gaseous Diffusion Plant,
Paducah, Kentucky**

Date Issued – September 11, 2002

Prepared by
WESKEM, LLC
Under subcontract 23900-BA-RM005F
Prepared for the
US Department of Energy
Office of Environmental Management

BECHTEL JACOBS COMPANY LLC
managing the
Environmental Management Activities at the
East Tennessee Technology Park
Oak Ridge Y-12 Plant Oak Ridge National Laboratory
Paducah Gaseous Diffusion Plant Portsmouth Gaseous Diffusion Plant
Under contract DE-AC05-98OR22700
for the
U.S. DEPARTMENT OF ENERGY

This report is an abridged edition. The following sections have been omitted from this report, but are included in the full report.

OS-05 DMSA ZONE MAP

HP **SURVEY** DATA

SME INSPECTION / SAMPLING SUMMARY

OREIS CHARACTERIZATION REPORT

RFD FORMS

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ACRONYMS

ACM	Asbestos Containing Material
ADC	Authorized Derivative Classifier
DMSA	Department of Energy Material Storage Area
DOE	Department of Energy
dpm	Disintegrations per Minute
ft ²	Square Feet
ft ³	Cubic Feet
EPA	Environmental Protection Agency
HP	Health Physics
IH	Industrial Hygiene
lbs	Pounds
Lc	Level Sub C
LLW	Low Level Waste
MDA	Minimum Detectable Activity
NCS	Nuclear Criticality Safety
OREIS	Oak Ridge Environmental Information System
OS	Outside
PCB	Polychlorinated Biphenyl
PEL	Permissible Exposure Limits
PGDP	Paducah Gaseous Diffusion Plant
RCRA	Resource Conservation and Recovery Act
RFD	Request for Disposal
RMA	Radioactive Material Area
RPD	Relative Percent Difference
SME	Subject Matter Expert
SWMU	Solid Waste Management Unit
SVOA	Semi-volatile Organic Analysis
TCLP	Toxicity Characteristic Leaching Process
TIO	Technical Information Officer
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
USEC	United States Enrichment Corporation
VOA	Volatile Organic Analysis

EXECUTIVE SUMMARY

Department of Energy Material Storage Area (DMSA) Outside (OS)-05 is located west of the intersection of 4th and Tennessee Streets in the Southwest quadrant of the plant. It is also identified as Solid Waste Management Unit (SWMU) #216. The DMSA was used to store surplus/used fire extinguishers and other fire department related materials. The majority of the material was containerized in six roll-off bins. This DMSA was initially categorized as a Phase 1 DMSA (expected to have no fissionable material but not fully characterized). The DMSA now qualifies as a Phase 3 DMSA since it has been fully characterized and has no fissionable material. The characterization of OS-05 was initiated in December 2001 and was completed in April 2002.

RCRA/Mixed

There were no Resource Conservation Recovery Act (RCRA)/Mixed items identified in this DMSA.

TSCA

There were no Toxic Substance Control Act (TSCA)/Polychlorinated Biphenyl (PCB) or asbestos containing materials (ACM) items identified in this DMSA.

Solid Waste

There were no solid wastes identified in this DMSA.

LLW

All of the material in this DMSA was characterized as low level waste (LLW). There is a volume of -4,899.44 cubic feet (ft³) and a weight of -42,099 pounds (lbs). The containers and equipment/material were given barcode identification for future inventory control and equipment location identification. The LLW will remain in the DMSA.

NCS

There were no Nuclear Criticality Safety (NCS) concerns in this DMSA. All items in the DMSA were classified as **NCS** Exempt.

IH

All Industrial Hygiene (**M**) data has been reviewed. All quality control samples were within normal acceptable guidelines. No personnel were exposed to any airborne concentrations above a permissible exposure limit (PEL) or threshold limit value (TLV).

HP

Health Physics (HP) smear samples were conducted. According to the radiological surveys, the highest Alpha reading was 300 disintegrations per minute (dpm)/100cm² on a pile of various size cart wheels/tires. The highest Beta/Gamma reading was 104,335 dpm/100cm² on a Type 1 fire extinguisher.

Safety

There were no safety related events during the characterization process. A safety officer was present during all activities and all workers had stop work authority.

The characterization of OS-05 was photographed for documentation purposes. These photographs are part of the **DMSA** Control Files. Several of these photographs are included in this report for clarification of activities. These photographs are located in section one of this report.

DMSA OS-5 Rolloff Bin of Waste After Characterization Completed



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DMSA OS-5 View of Rolloff Bins



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DMSA OS-5 Waste Before Characterization



DMSA OS-5 Waste During Characterization



DMSA OS-5 Waste After Characterization



DMSA OS-5 Rolloff Bin of Characterized Waste



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Inventory And Characterization Report

<i>Curr. Zone</i>	<i>Item ID</i>	<i>Barcode #</i>	<i>Description</i>	<i>Vol. ft3</i>	<i>llw</i>	<i>tsca</i>	<i>rcra</i>	<i>mix</i>	<i>asb</i>	<i>fis</i>	<i>lnd</i>	<i>Gen. Date</i>	<i>Char. Date</i>	<i>Transferred To</i>
OS-05														
	111335-01	DMSA0110955	ROLL OFF BIN 14 FIRE EXTINGUISHERS	776	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12/7/01	12/7/01	
	111336-01	DMSA0110956	ROLL-OFF BIN	776	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12/7/01	12/7/01	
	111337-01	DMSA0110957	11 FIRE EXTINGUISHERS AND 12 CARTS	776	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12/10/01	1810101	
	111338-01	DMSA0110958	ROLL OFF BIN	776	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12/13/01	1813/01	
	111339-01	DMSA0111095	FIRE EXTINGUISHERS	776	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12/13/01	12/13/01	
	111340-01	DMSA0110960	PORTABLE FIRE EXTINGUISHERS	776	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12/14/01	12/14/01	
	111341-01	DMSA0110961	MOTOR GENERATOR UNIT.	95	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12/27/01	12/27/01	
	111343-01	DMSA0110962	CONCRETE MOTOR BASE	32	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12/27/01	12/27/01	
	111344-01	DMSA0110963	17 WOODEN PALLETS	104	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12/27/01	12/27/01	
	111345-01	DMSA0110964	55 GAL DRUM	7.4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1/4/02	1/4/02	
	111346-01	DMSA0110965	(2)- 5 GALLON CONTAINERS	1.34	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1/4/02	1/4/02	
	111347-01	DMSA0110966	1- CROSS TIE	3.7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1/4/02	1/4/02	
Summary for OS-05 (12 RFDs)				4899.44 Ft3										
Grand Total (12 RFDs)				4899.44	Total Ft3									

Legend

asb	Asbestos	Char	Characterization Date	fis	Fissionable
Gen	Generation Date	llw	Low Level Waste	lnd	Landfill
mix	Mixed Waste	rcra	Resource Conservation Recovery Act	tsca	Toxic Substances Control Act

OS-05 DMSA INVENTORY

Description	Original RFD #	Material Classification	Column #	Barcode	# Items	Volume Cubic Feet (ft ³)	Estimated Weight (lbs)	Material Transferred to USEC
Roll-off Bin - (14) Large Fire Extinguishers and (6) Hand Type Extinguishers	111335	LLW	OS-05	DMSAOI10955	1	776	4,960	No
Roll-off Bin - Fire Extinguishers, Hoses, Nozzles, Wheels, Carts, and Misc. Parts	111336	LLW	OS-05	DMSAOI10956	1	776	9,546	No
Roll-off Bin - (11) Fire Extinguishers and (12) Fire Extinguisher Carts	111337	LLW	OS-05	DMSAOI10957	1	776	2,250	No
Roll-off Bin - Portable Fire Extinguishers, Hoses, Nozzles, Wheels for Carts, Carts, Trash, and Misc. Metal Parts from the Fire Extinguishers	111338	LLW	OS-05	DMSAOI10958	1	776	6,943	No
Roll-off Bin - (3) Co2 Fire Extinguishers, (14) Fire Extinguishers, (2) Empty 55 Gallon Drums, and (1) Fire Extinguisher Cylinder Cover	111339	LLW	OS-05	DMSAOI10959	1	776	5,285	No
Roll-off Bin - (14) Powder	111340	LLW	OS-05	DMSAOI10960	1	776	5,050	No
	111341	LLW	OS-05	DMSAOI10961	1	95	3,000	No
	111343	LLW	OS-05	DMSAOI10962	1	32	4,160	No
	111344	LLW	OS-05	DMSAOI10963	1	104	340	No
	111345	LLW	OS-05	DMSAOI10964	1	7.4	300	No
	111346	LLW	OS-05	DMSAOI10965	1	1.34	15	No
	111347	LLW	OS-05	DMSAOI10966	1	3.7	250	No

Total Volume (ft³)	Total Estimated Weight (lbs)
4,899.44	42,099